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tention was again called to it by Dr. Brinkley's late communication. By reference to an annexed table, it appears that the greatest error in a series of ten observations, made with the transit, could not have been more than  $0''03$ , and consequently it is not probable that the error in fifty observations should have exceeded half that quantity. Taking, however, every circumstance into consideration, it is possible that the whole parallax of  $\alpha$  Aquilæ may have amounted to half a second, which is about a tenth part of that assigned to this star by Dr. Brinkley. The author, however, proposes to continue the investigation; and when his observations shall have been sufficiently multiplied, promises to communicate the result to the Society.

*On the Parallax of the Fixed Stars in Right Ascension.* By John Pond, F.R.S. Astronomer Royal. Read May 28, 1818. [Phil. Trans. 1818, p. 481.]

This paper is intended as an appendix to a former one on the same subject. The author extends his investigation to a few more of the principal fixed stars. He divides the results of any one star into two parts; first, alternately or accidentally, and also according to the law of parallax; and as no greater difference is observable in the latter than in the former case, it is demonstrable that parallax has had no sensible effect on the observation. He next inquires what may be the magnitude of the parallax that might be concealed by the accidental error of observation. Without entering into a rigorous computation on the laws of probability, he conceives that it may be inferred by inspection, that it is almost impossible that the longer axis of the ellipse, described by the brightest fixed star, can exceed  $0''6$ , and it is very improbable that it should amount to half as much; and as this quantity can never derange the mean place of a star  $0''1$  in declination, it is evident that all attempts to determine the parallax by a meridian instrument of any description must be utterly hopeless.

*An Abstract of the Results deduced from the Measurement of an Arc on the Meridian, extending from Latitude  $8^{\circ} 9' 38''4$ , to Latitude  $18^{\circ} 3' 23''6$  N., being an Amplitude of  $9^{\circ} 53' 45''2$ .* By Lieut. Colonel William Lambton, F.R.S. 33rd Regiment of Foot. Read May 21, 1818. [Phil. Trans. 1818, p. 486.]

The author, at the commencement of this paper, refers to the 12th volume of the Asiatic Researches, in which there are detailed accounts of two complete sections of an arc on the meridian, measured by him in prosecuting the Trigonometrical Survey of the Peninsula of India. The first is comprehended between the parallels of Punnæ, a station near Cape Comorin, in latitude  $8^{\circ} 9' 38''39$ , and Patchipolliam in Coimbetoor, in latitude  $10^{\circ} 59' 48''93$ . The second is comprehended between the parallels of Patchipolliam and Namthabād, a station near Gooty in the ceded districts, in latitude  $15^{\circ} 6' 0''21$ .

Since those measurements, the author has obtained another section, extending from Namthabad to Daumergidda, in the Nizam's dominions, which being in latitude  $18^{\circ} 3' 23''$ , gives a total arc of  $9^{\circ} 53' 45''$  in amplitude.

From the first of these sections, Colonel Lambton finds the length of the degree due to latitude  $9^{\circ} 34' 44''$  (the middle point of that arc), equal to 60472.83 fathoms. The second section, whose middle point is in latitude  $13^{\circ} 2' 55''$ , gives the mean degree equal to 60487.56 fathoms; and the last section gives the degree equal to 60512.78 fathoms due to the latitude of  $16^{\circ} 34' 42''$ , the middle point of that section.

The author proceeds to compare each of these degrees, first with the French measure, then with the English, and lastly, with the Swedish measure, and thence obtains a general mean for the compression at the poles. The first mean of these three degrees, used with the French degree, gives the compression  $\frac{30}{37.15}$ ; the second mean of the same three degrees, used with the English degree, gives  $\frac{31}{37.54}$ ; and the third mean of these three degrees, used with the Swedish degree, gives  $\frac{31}{37.15}$ ; so that the mean of these three means will give the compression  $\frac{30}{37.54}$ , or  $\frac{3}{4}$  nearly of the polar axis.

The number of base lines in this extensive arc are five, all measured with the chain extended in coffers, with elevating screws, &c.

The author, after giving a variety of data, proceeds to investigate the formulæ which he has employed in his calculations, and concludes with a table of the lengths of different degrees for every third degree from the equator to the pole.

*The Croonian Lecture. On the Conversion of Pus into Granulations or New Flesh. By Sir Everard Home, Bart. V.P.R.S. Read November 5, 1818. [Phil. Trans. 1819, p. 1.]*

The changes which pus undergoes in the formation of new flesh are so analogous to those which take place in the blood, and which were discussed in the author's Croonian lecture of last year, that he is induced to consider the two fluids as possessed of the same properties, the colour of the globules being the principal characteristic distinction between them.

That pus is a transparent fluid, in which globules are subsequently formed, was proved by the author in 1788; and in July 1817 Mr. Bauer observed the same property in the serum of the blood: he saw globules forming in that fluid while he was examining it in the field of the microscope. Human blood, sheep's blood, and calves' blood, presented to Sir Everard similar results; the serum of which, when warm and fresh, was observed, in a space covering  $\frac{1}{1000}$ th part of an inch, to produce from six to twelve globules in a few minutes, two only being observed in the first instance.

The author, after detailing further experiments on the formation of globules in the serum of the blood, proceeds to examine the changes which happen in pus upon the surface of a sore, having previously